

Appl. No. 10/707,561
Amdt. dated January 11, 2005
Reply to Office action of October 18, 2004

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): A wafer grinding apparatus comprising:

a wafer-transporting device for transporting a wafer comprising:

at least a suction pad having a first surface and a second surface, the second
5 surface being flexible for sucking the wafer; and

a transporting mechanism connected to the first surface of the suction pad
for transporting the wafer;

at least a first table and a second table for situating the wafer, wherein the
wafer-transporting device is utilized for moving the wafer from the first table
10 to the second table;

at least a parking region for parking the suction pad;

a first nozzle for ejecting a first liquid to the first surface of the suction pad for
cleaning the first surface; and

a second nozzle for ejecting a second liquid to the second surface of the suction pad
15 and the wafer for cleaning the second surface and the wafer [[.]];

wherein when the suction pad stays in the parking region, the first surface and the
second surface of the suction pad are cleaned respectively by the first nozzle
and the second nozzle, and wherein when the suction pad passes through the
parking region, the first surface of the suction pad and the wafer are cleaned
20 respectively by the first nozzle and the second nozzle.

Claim 2 (Original): The wafer grinding apparatus of claim 1 further comprising at least an
air intake line, and an air suction device connected to one end of the air intake line for
pumping air.

Claim 3 (Original): The wafer grinding apparatus of claim 2 wherein the suction pad
comprises a pedestal positioned on the transporting mechanism and contains at least a

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first opening connected to another end of the air intake line.

Claim 4 (Original): The wafer grinding apparatus of claim 3 wherein the suction pad further comprises a flexible suction tray located on the pedestal and contains at least a
5 second opening communicating with the first opening, and the wafer is sucked by the suction pad through vacuum suction when the air suction device pumps air.

Claim 5 (Original): The wafer grinding apparatus of claim 3 wherein the suction pad further comprises a plurality of equally spaced flexible suction trays located on a
10 peripheral region of the pedestal, each of the flexible suction trays comprises at least a second opening communicating with the first opening, and the wafer is sucked by the suction pad through vacuum suction when the air suction device pumps air.

Claim 6 (Original): The wafer grinding apparatus of claim 3 wherein the suction pad
15 further comprises at least an elastic pad positioned on the pedestal and contains at least a second opening communicating with the first opening, and the wafer is sucked by the suction pad through vacuum suction when the air suction device pumps air.

Claim 7 (Original): The wafer grinding apparatus of claim 3 wherein the suction pad
20 further comprises at least an elastic ring positioned on the pedestal.

Claim 8 (Original): The wafer grinding apparatus of claim 7 wherein the suction pad further comprises at least an elastic pad positioned on portions of the pedestal not covered
25 by the elastic ring.

Claim 9 (Original): The wafer grinding apparatus of claim 7 wherein the suction pad further comprises a radial elastic pad positioned on portions of the pedestal not covered
by the elastic ring.

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Claim 10-14 (Canceled)

5 Claim 15 (Currently Amended): The wafer grinding apparatus of claim [[11]] 1 wherein the first table is selected from a group consisting of a positioning table, a grinding table, a spinner table, and a cassette supporting table.

10 Claim 16 (Currently Amended): The wafer grinding apparatus of claim [[11]] 1 wherein the second table is selected from a group consisting of a positioning table, a grinding table, a spinner table, and a cassette supporting table.

15 Claim 17 (Original): The wafer grinding apparatus of claim 1 wherein the wafer grinding apparatus is utilized to grind a backside of the wafer for preventing cross-shaped flaws from forming in the wafer.

Claim 18 (Original): The wafer grinding apparatus of claim 1 wherein the second nozzle comprises a spray nozzle.

20 Claim 19 (Original): The wafer grinding apparatus of claim 1 wherein the first liquid and the second liquid both comprise water.

Claim 20 (Original): The wafer grinding apparatus of claim 1 wherein the transporting mechanism comprises a T-shaped arm.

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